

[illegible]

3A SUKHANOVA, L. S.

26

Determination of the degree of acidity in offset colors  
 N. G. Goloshkevich and L. S. Sukhanova: *Poligraf. Prom.*  
*1948, No. 11, 23-4; Chem. Zvesti. 1949, 11, 10.*  
 The method is independent of the color and the degree of  
 dispersion of the pigment. A 10-g. sample is dissolved in  
 70 cc. of benzene in a porcelain dish. The pigment is sepd.  
 by the addn. of 10-20% alc. and filtered off. The solvent  
 is distd. off from the filtrate until the vol. is reduced to 30 cc.  
 The residue is then evapd. A 0.3-g. portion of the residue is  
 dissolved in a neutral alc.-benzene mixt. (1:4) and titrated  
 with 0.1 N alc. KOH with alkali blue. The acidity of 1 g.  
 of varnish is calcd. according to the formula:  $K = a/T$ ,  
 where  $a$  is the amt. of KOH in cc.,  $b$  is the wt. of sample, and  
 $T$  is the titer of alc. KOH in mg. The degree of acidity of the  
 pigment is calcd. from the pigment varnish ratio. The  
 ratio is 1:0.3 for Cr pigments, 1:1.2 or 1:1.0 for lacquers  
 and 1:0.75 for Milon. M. G. Moore

3(4)

AUTHOR: Sukhanova, L. S.

SOV/6-59-6-11/22

TITLE: From the Experience in Establishing the Graphic Phototriangulation Network (Iz opyta postroyeniya graficheskikh fototriangulyatsionnykh setey)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 6, pp 41-43 (USSR)

ABSTRACT: The author has been working for 27 years at concentrating the horizontal photo control according to the method of graphic phototriangulation, complying with the standards at 200% on an average with a good quality of work. She reports here on her working method. At first she collects all data. She classifies all aeronegatives and aerial photographs by the routes, and does the pin-pricking on the aeronegatives. Then she makes the prints of the central directions. Next she develops rhombic one-route nets. Before reducing the nets, she checks the base and carries out the final balancing of the photogrammetric nets by means of the prints of the central directions. Finally she fills a form. In it she indicates the method of building up the nets of plane phototriangulation, the net scales, the distribution, the existence and size of markings. The whole is then checked by the brigadier.

Card 1/1

S/121/62/000/001/002/004  
D040/D113

AUTHORS: Krivonukhov, V.A., Yegorov, S.V., Rudnev, A.V., and Sukhanov, A.A.

TITLE: Ways of improving the effect of coolants on cutting tools

PERIODICAL: Stanki i instrument. no. 1, 1962, 30-35

TEXT: Methods of improving the effect of coolants on cutting tools are discussed. As stated in investigations conducted by VNII and other organizations, the effect of the application of cutting coolants by any of the now existing methods (by falling jet, high- and low-pressure, and fog) differs under different cutting conditions and greatly depends on the physical property of the metal being machined, the material of the tool edge, depth of cut, etc. The cutting laboratory of VNII states that the durability of cutters, when the cutting fluid is cooled down to 1-2°C, is more than doubled in comparison with the cutting process where the cutting fluid temperature is 20°C. In intermittent turning of heat-resistant **5H 437E** (EI437B) alloy with cutters of **P 18** (R18) steel and high-pressure cooling with no. 1 fluid (50% aqueous glycol solution), the durability of cutters was 2.5-3 times

Card 1/3

Ways of improving the ...

3/121/62/700/101/007/001  
5040/D113

methods: (3) A stable required temperature of the cutting fluid is important for raising the durability of cutting tools. There are 5 figures and 7 references: 2 Soviet and 1 non-Soviet-bloc. The English-language reference is: Best, O., Gilbert, W., Influence of Applying Cutting Fluids of Different Temperatures when Turning Steel, "Transactions of the ASME", v. 67, no. 4, 1945, p. 217-224.

Card 3/3

15.7300  
~~5 (2), 15 (7)~~  
AUTHORS:

Shtern, M. A., Sukhanova, M. V.

S/064/59/000/07/009/035  
B005/B123

TITLE: On the Production of Molybdate-chrome Red

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 7, pp 584 - 586 (USSR)

ABSTRACT: Molybdate-chrome red consisting of lead chromate, -molybdate, and -sulfate, is one of the most important inorganic red pigments. The authors investigated the dependence of the chrome red color on the velocity of precipitation. At the same time the influence of the order of sodium sulfate additions to the lead chromate solution was investigated. It was found that by adding the total amount of sodium sulfate at the beginning of precipitation, the precipitation of the undesired yellow monoclinic form of lead chromate can be prevented. Precipitations were obtained at 20° in a medium of pH 2. The concentration of the solutions was 0.1 m. While mixing it intensively, a mixture of the solutions of sodium bichromate, ammonium molybdate, sodium sulfate, and soda was added to the lead nitrate solution with varying velocity. In all experiments a pigment with constant composition  $7 \text{ PbCrO}_4 \cdot \text{PbMoO}_4 \cdot \text{PbSO}_4$  was obtained. By

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On the Production of Molybdate-chrome Red

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S/064/59/000/07/009/035  
B005/B123

adding soda a constant pH-value of the medium is achieved during precipitation. Table 1 shows the color changes of chrome red in dependence of the velocity of precipitation. Covering power and color intensity of obtained pigments are specified as well. It became evident that if the precipitation is retarded from 2-3 minutes to 25-30 minutes the chrome red color tone becomes deeper. During a further retardation the color tone of the pigment changes from light red to brown-orange. Investigations in the electron microscope (Figs 1-3) showed that the color change is caused by a recrystallization of the pigment grains to rod-like crystals during slow precipitation. Chrome red produced at an optimum precipitation rate is pure light red. When grinding it with a spatula, the pigment, however, shows yellow inclusions that prove the inhomogeneity of pigment grains in the mass. The authors investigated the influence of the reaction conditions on the color and the homogeneity of the chrome red coloring (Table 2). It appeared that if the majority of the mixture to be used for precipitation is added quickly to the lead nitrate solution, homogeneous particles are formed in the pigment mass. A sufficiently homogeneous pigment

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On the Production of Molybdate-chrome Red

S/064/59/000/07/009/035  
B005/B123

that is still red (not yet orange) is obtained by quickly adding a maximum of half the precipitant. Table 3 shows the influence of the pH-value of the medium at the end of the precipitation on the pigment color. The optimum pH-value lies between 1.8-2.2. With higher or lower pH orange-red pigments are formed. The authors found that additions of 1-2% aluminum oxide or silicic acid stabilize the pigment adequately so that during long storage in the parent solution and drying no color changes occur. Sodium silicate gives the pigment a more saturated color. As a summary of their investigations the authors specify the optimum technical conditions for the production of molybdate-chrome red. The method described has already been tested and introduced into the industry. There are 3 figures, 3 tables, and 5 references.

ASSOCIATION: Leningradskiy filial GIPI (Leningrad Branch of the State Design and Planning Scientific Research Institute of Varnish and Paint Industry)

Card 3/3



SUKHANOVA, M.V.; NOVIKOVA, G.G.

Increasing the sedimentation stability of enamel paints containing  
barium and iron oxide reds by means of the addition of surface-  
active agents. Lakokras. mat. i ikh prim. no. 4:26-28 '63.  
(MIRA 16:10)

SANIN, A.A.; SUKHANOVA, N.N.

Differential amplitude analyzers for impulses with low resolving power. Vest.  
Mosk.un. 8 no.8:105-108 Ag '53. (MLBA 6:11)

1. Fizicheskiy fakul'tet.

(Electric measurements)

USSR / Microbiology. Medical and Veterinary Microbiology. F-5

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 22053

Author : Kuzin, L.D., Bereshnoi, N.F., Sukhanova, N.P.

Inst :

Title : On the Prospectives of Obtaining a New Vaccine Against Anthrax of Farm Animals (Communication 2).

Orig Pub: Tr. Chkalovskogo s.-kh. in-ta, 1955, 7, 205-212

Abstract: A nonencapsulated avirulent culture of anthrax bacilli whose properties are stably preserved, was obtained from the virulent strain #343 by means of direct cultivation. It is virulent only to white mice in a dose of 0.2 ml. This culture can form a reliable immunity in animals inoculated with it (intramuscularly, twice). The use of a 20% camphor oil solution stimulates the nervous system and assures immunity even in animals inoculated once. The spore vaccine, unlike the avirulent 24-hour culture, causes death in 11-12% of the inoculated guinea pigs. Part 1 see Ref. Zh.-Biol., 1955, 40326.

Card : 1/1

-49-

*SUKHANOVA, N.S.*

SKOBLIN, A.P., kandidat meditsinskikh nauk; SUKHANOVA, N.S.

Treating fractures of the neck of the femur in children. Ortop.  
travm. i protez. 17 no.6:111-112 N-D '56. (MLRA 10:2)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i  
travmatologii im. M.I.Sitenko (direktor - zasluzhennyy deyatel'  
nauki professor N.P.Novachenko)  
(FEMUR--FRACTURES)

SUKHANOVA, N.P.

Seasonal variability of litter and lysimetric waters in pine forests. Bot. zhur. 50 no.12:1735-1741 D '65.

(MIRA 19:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

MEDVEDEV, V.I.; SAVINA, L.N.; SUKHANOVA, N.V.

Physiological analysis of the vibration of vocal folds (with reference to Husson's theory). Probl.fiziol.akust. 4:208-215 '59.  
(MIRA 13:5)

1. Institut evolyutsionny fiziologii imeni I.M. Sechenova AN SSSR, Leningrad.

(VOICE)

SUKHANOVA, N.V.

Motility of the nervous processes in the motor analyzer of children  
of preschool age. Zhur.vys.nerv.deiat. 9 no.5:679-683 S-O '59.  
(MIRA 13:3)

1. Institut evolyutsionnoy fiziologii Akademii nauk SSSR im. I.M.  
Sechenova, Leningrad.  
(NERVOUS SYSTEM physiol.)

SUKHANOVA, N.V.

Characteristics of the formation of the motor component in a child's verbal reaction. Zhur. vys. nerv. deiat. 11 no.5:855-859 S-0 '61.

(MIRA 15:1)

1. Sechenov Institute of Evolutionary Physiology, U.S.S.R. Academy of Sciences, Leningrad.  
(ELECTROPHYSIOLOGY) (SPEECH)



SUKHANOVA, O.I. (g.Khimki)

Polytechnical training in the teaching of chemistry. Khim.v shkole 11  
no.4:67-68 J1 '56. (MLRA 9:9)  
(Chemistry--Study and teaching)

GRUM-GRZHIMAYLO, S.V.; BRILLIANTOV, N.A.; SVIRIDOVA, R.K.; SUKHANOVA, O.N.

Changes in the absorption spectrum arising when the temperature of some nickel-colored synthetic crystals is lowered. Kristallografiia 5  
no.2:288-294 Mr-Apr '60. (MIRA 13:9)

1. Institut kristallografi AN SSSR i Moskovskiy gosudarstvennyy  
universitet im. M.V.Lomonosova.  
(Nickel sulfate--Spectra)

S/051/62/013/001/014/019  
E039/E420

Absorption spectra. ...

the iron beryls are not observed in the blue aquamarine. At 77°K very weak narrow absorption bands are observed which become more distinct at 4.2°K. In all samples the extraordinary waves are polarized in the 17190 and 18620  $\text{cm}^{-1}$  bands, particularly in the green-yellow beryl no.209 having a maximum thickness of 6.83 mm. There is also a weak unpolarized band at 21520  $\text{cm}^{-1}$ . The 18620 and 21520 bands are not given in the work of Dvir and Low. In all samples the extraordinary waves are completely polarized in the 26780  $\text{cm}^{-1}$  band. Dvir and Low observed bands at 26500 and 17590  $\text{cm}^{-1}$  which are sufficiently near to the authors' at 26780 and 17190  $\text{cm}^{-1}$ . No further change in the absorption spectra were discovered on reducing the temperature to 1.7°K. The five absorption bands presented by Dvir and Low in their paper were interpreted as due to transitions between levels in  $\text{Fe}^{3+}$  ions, separated in the octahedral crystal field. The bands observed near to those of Dvir and Low are interpreted as: band 26780  $\text{cm}^{-1}$  transition in  $\text{Fe}^{3+}$   ${}^6\text{A}_g(\text{d}\gamma^3\text{d}\gamma^2) \rightarrow {}^4\text{T}_2(\text{d}\gamma^3\text{d}\gamma^2)$  and the band 17190  $\text{cm}^{-1}$  as the  ${}^6\text{A}_g(\text{d}\gamma^3\text{d}\gamma^2) \rightarrow {}^4\text{T}_2(\text{d}\gamma^4\text{d}\gamma)$  transition.

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S/051/63/014/002/007/026  
E039/E120

AUTHORS: Grum-Grzhimaylo, S.V., Brilliantov, N.A.,  
Sviridov, D.T., Sviridova, R.K., and Sukhanova, O.N.

TITLE: Absorption spectra of crystals containing  $\text{Fe}^{3+}$  for  
temperatures down to  $1.7^\circ\text{K}$

PERIODICAL: Optika i spektroskopiya, v.14, no.2, 1963, 228-233

TEXT: The absorption spectra of demantoid-garnet  
( $\text{Ca}_3\text{Fe}_2\text{Si}_3\text{O}_{12}$ ), vesuvianite ( $\text{H}_2\text{Ca}_{10}(\text{MgFe})\text{Al}_4\text{Si}_6\text{O}_{18}$ ) and epidote  
( $\text{Ca}_2(\text{AlFe})\text{O}(\text{SiO}_4)[\text{Si}_2\text{O}_7]\text{OH}$ ) are obtained at temperatures of 290,  
77, 4.2 and  $1.7^\circ\text{K}$ . The spectra were obtained in polarized light  
using a  $\text{C}\Phi-4$  (SF-4) spectrograph for observations at  $290^\circ\text{K}$ , and  
quartz WC-22 (ISP-22) and glass ISP-51 spectrographs at the lower  
temperatures. In these crystals the color is produced by the  
isomorphous substitution of  $\text{Fe}^{3+}$  ions for  $\text{Al}^{3+}$ . At room temperature  
the absorption spectra of these crystals show wide bands  
characteristic of material containing  $\text{Fe}^{3+}$  ions. At low  
temperatures these bands are narrower. The position of these  
bands for demantoid and epidote is shown in the table.

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Absorption spectra of crystals ...

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E039/E120

Position of narrow absorption bands, cm<sup>-1</sup>

Демантоид (Demantoid)

|                       |                          |                                     |                            |                               |                                     |                               |                            |                            |
|-----------------------|--------------------------|-------------------------------------|----------------------------|-------------------------------|-------------------------------------|-------------------------------|----------------------------|----------------------------|
| I { 1.7°<br>4.2<br>77 | 22760 (c)*<br>(c)<br>(c) | 22970 (cp)<br>(cp)<br>(cp)          | 23080 (cp)<br>(cp)<br>(cp) | 23300 (sl)<br>(sl)<br>(sl)    | 23550 (o. sl)<br>(o. sl)<br>(o. sl) | 23720 (sl)<br>(sl)<br>(o. sl) | 23970 (sl)<br>(sl)<br>(sl) | 24450 (cp)<br>(cp)<br>(sl) |
| II { 1.7<br>4.2<br>77 | 25930 (c)<br>(c)<br>(c)  | 26090 (o. sl)<br>(o. sl)<br>(o. sl) | 26270 (cp)<br>(cp)<br>(sl) | 26490 (sl)<br>(sl)<br>(o, sl) | 26730 (cp)<br>(cp)<br>(cp)          | 26980 (o. sl)<br>(o. sl)<br>— | 27300 (cp)<br>(cp)<br>—    |                            |

Эпидот (Epidot)

|      | band<br>I полоса | band<br>II полоса | band<br>III полоса | band<br>IV полоса (поляризо-<br>вана **)<br>(polarized) |
|------|------------------|-------------------|--------------------|---|
| 1.7° | 21500 (o)        | 22100 (c)         | 22620 (o. sl)      | 23040 (sl)  |
| 4.2  | 21500 (c)        | 22100 (c)         | 22620 (o. sl)      | 23040 (sl)  |
| 77   | 21300 (cp)       | 22030 (o)         | 22620 (o. sl)      | —   |
| 290  | 21080 (sl) (p)   | 21950 (cp) (p)    | —                  | —   |

c - strong, cp - medium, sl - weak, o. sl - very weak,  
p - diffuse.

Card 3/3

PUCHACHENKO, A.I.; SUKHANOVA, O.P.

Hydrogen bond in radicals with the participation of an unpaired  
electron. Zhur. strukt. khim. 6 no.1:32-38 Jan '65.  
(MIRA 13:12)

1. Institut Khimicheskoy fiziki AN SSSR. Submitted November  
25, 1963.

RESEARCHER: ... ..  
... ..

$\overline{M}$  ... ..  
... ..

1. ... ..

S/203/61/001/006/021/021  
D055/D113

AUTHOR: Sukhanova, R.D.

TITLE: The ionospheric effect of the solar eclipse of February 15, 1961, according to observations made in Salekhard

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 6, 1961, 1016-1017

TEXT: On February 15, 1961, the day of the solar eclipse, and the preceding and following days, observations at the Salekhard Ionospheric Station ( $\phi_N = 66^{\circ}32'$ ,  $\lambda_E = 66^{\circ}42'$ ) were made according to a special program: every five minutes between 10 and 16 hours local time on February 14, 15 and 16, and continuously from 70 min. before the optical eclipse began, to 30 min. after it ended. The Salekhard Station has an **ANC** -247 (AIS-247) ionosonde, whose frequency range is 1-18 Mc, with a 2.5 kw pulse, a sampling speed of 20 sec., altitude marks every 50 km and a ceiling of 750 km. Photo-recording was made on a 35 mm film. The maximum phase of the optical eclipse on the Earth's surface at Salekhard was 0.91. The ionospheric

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S/139/62/000/003/014/021  
E039/E420

AUTHORS: Veraksa, V.I., Lange, V.N., Sukhanova, R.V.  
TITLE: Some characteristics of the microhardness of single  
crystals of tellurium with small admixtures of antimony  
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika,  
no.3, 1962, 124-126

TEXT: The effect of small admixtures on the properties of  
semiconductors in general is discussed and published work on  
tellurium alloys reviewed. The work described in this paper was  
undertaken on the grounds that changes in mechanical properties  
must be closely connected with structural changes in the lattice  
of the alloys. Samples of the binary alloy Te-Sb were prepared  
from vacuum distilled materials mixed for half an hour at 500°C  
with an electromagnetic vibrator. Single crystals were then  
grown and annealed for 10 hours at 300°C. Two series of  
microhardness tests were carried out and the results are  
expressed in terms of hardness relative to pure tellurium as  
unity. As the antimony content increases there is an initial  
decrease in hardness to about 0.6 for 0.002% Sb rising to .  
Card 1/2

L 09128-67 EWT(m)/EWP(t)/ETI IJP(c) JD/HW  
 ACC NR: AP6032617 SOURCE CODE: UR/0126/66/022/003/0380/0391 47  
 AUTHOR: Kirenskiy, L. V.; Pyn'ko, V. G.; Sukhanova, R. V.; Sivkov, N. I.; Pyn'ko, G. P.; Edel'man, I. S.; Komalov, A. S.; Kan, S. V.; Syrova, N. I.; Zvegintsev, A. G.  
 ORG: Institute of Physics SO AN SSSR (Institut fiziki SO AN SSSR); Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedinstitut)  
 TITLE: Epitaxial films of iron, nickel and cobalt [report presented at the Conference on Physics of Ferro- and Antiferromagnetism, Sverdlovsk, 5-7 July 1965]  
 SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 3, 1966, 380-391 III  
 TOPIC TAGS: magnetic anisotropy, epitaxial growing, hysteresis loop, metal film  
 ABSTRACT: The authors study the epitaxial growth of iron, nickel and cobalt films thermally vaporized onto ionic crystals split in air and in a vacuum. It is shown that when the substrates are heated in a vacuum of  $10^{-4}$  mm Hg, the surface state is changed with a favorable effect on epitaxy. The phase composition of the film may be controlled by proper selection of the substrate. The fields of anisotropy of the films are measured and the effect which application of a magnetic field during vaporization has on the magnetic anisotropy of the films is studied. The domain structure of the films and its dynamics are analyzed and the results are used as a basis for explaining the shape of hysteresis loops. The coercive force is measured in films of various thickness. It is shown that the coercive force of the films is always much less than the field of anisotropy and is approximately inversely proportional to the saturation magnetization. Orig. art. has: 13 figures, 1 table, 5 formulas.  
 SUB CODE: 11, 20/ SUBM DATE: 30Jul65/ ORIG REF: 004/ OTH REF: 007

- L 15385-66 EWT(1)/EWT(m)/EWP(a)/T/EWP(t)/EWP(b) LJP(c) JD/HH/GG  
ACC NR: AP6004462 SOURCE CODE: UR/0048/66/030/001/0034/0036

AUTHOR: Kirenskiy, L.V.; Sukhanova, R.V.; Pyn'ko, G.P.

ORG: Institute of Physics, Siberian Section of the Academy of Sciences, SSSR  
(Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Domain structure of cobalt films grown on NaCl crystals /Transactions of the  
Second All-Union Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk  
10 July to 15 July, 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no.1, 1966 34-36

TOPIC TAGS: ferromagnetic film, magnetic thin film, cobalt, magnetic domain structure,  
magnetic anisotropy

ABSTRACT: Cobalt films were deposited at  $10^{-4}$  mm Hg on NaCl crystal cleavage surfaces  
having temperatures from room temperature to  $400^{\circ}\text{C}$ , and their domain structures were  
observed by means of a transmission electron microscope. Conditions for obtaining  
single-crystal films are reported in another communication. Films deposited on sub-  
strates at  $20^{\circ}\text{C}$  contained hexagonal, cubic and amorphous phases and had a domain  
structure that was initially mottled and developed under the influence of an ac field  
into a structure of coarse domains with weakly developed substructure. The mottled  
domain structure is ascribed to the presence of nonmagnetic inclusions. Films de-  
posited on substrates heated to 70 to  $150^{\circ}\text{C}$  did not show a mottled domain structure.

17429-56 EWT(m)/T/EWP(a)/EWP(t) - IJP(a) - JD/HW

ACC NR: AP6004466

SOURCE CODE: UR/0048/66/030/001/0050/0053

AUTHOR: Kirenskiy, L.V.; Sukhanova, R.V.; Pyn'ko, V.G.; Edel'man, I.S. 59

ORG: Physics Institute of the Siberian section of the SSSR Academy of Sciences  
(Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk State  
Pedagogical Institute (Krasnoyarsk gosudarstvennyy pedagogicheskiy institut)TITLE: Single-crystal films of iron-nickel alloys (Transactions of the Second All-Union  
Symposium on the Physics of Thin Ferromagnetic Films held at Irkutsk 10 July to  
15 July 1964) mSOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 50-53 and insert  
(facing page 45)TOPIC TAGS: ferromagnetic film, magnetic thin film, permalloy, iron nickel alloy,  
single crystal, magnetic anisotropy, magnetic coercive force, magnetic domain structure,ABSTRACT: Single-crystal 800 Å films of Fe-Ni alloys (5 to 95% Ni) were obtained by  
vacuum evaporation at  $10^{-3}$  to  $10^{-4}$  mm Hg onto the heated (250 to 400°C) surface of an  
NaCl crystal, although O.S. Heavens (Proc. Phys. Soc. 78, 33 (1961)) and A. Baltz (J.  
Appl. Phys., 32, 815 (1961)) found that high vacuum ( $10^{-9}$  mm Hg) and annealing was neces-  
sary to obtain single-crystal films. No reason for this discrepancy is suggested. The  
alloys containing less than 20% Ni crystallized in a body-centered lattice with a  
lattice constant of 2.828 Å and grew with the (001) face and (100) axis parallel to  
the (001) face and (110) axis, respectively, of the NaCl substrate; the alloys con-

L 39611-66 rel(1)/EXP(c)/INT(a)/T/EXP(T)/EXP(z)/EXP(b) INT(1) 20/10/1966 24  
 ACC NR: AP6004464 SOURCE CODE: UR/0048/66/030/001/0043/0045

AUTHOR: Pyn ko, V.G.; Sukhanova, R.V.

ORG: Institute of Physics, Siberian Section of the Academy of Sciences, SSSR  
(Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR); Krasnoyarsk State Ped-  
agogical Institute (Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Concerning epitaxial growth and structure of iron, nickel, and cobalt films  
Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic  
Films held at Irkutsk 10 July to 15 July, 1964 III

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 43-45 and insert facing pp. 44 and 45

TOPIC TAGS: ferromagnetic film, magnetic thin film, iron, cobalt, nickel, sodium chloride, epitaxial growing, crystal orientation,

ABSTRACT: Iron, cobalt, and nickel films were vacuum evaporated onto freshly cleaved rock salt crystal surfaces and their structures were investigated by electron diffraction. The films were deposited in three different types of apparatus, referred to as A, B, and C. In apparatus A the pressure during deposition was  $10^{-3}$  mm Hg. Apparatus B and C were commercial vacuum units (type UVR-2) in which the pressure was  $10^{-4}$  mm Hg. The substrates were heated at 300-400°C for 20-30 min before deposition. The deposition rate was usually about 100 Å/sec. Iron films deposited in apparatus

L 06760-67

ACC NR: AP6029127

the magnetization ripples was 1.25 micron, and the angular amplitude of the magnetization oscillations was  $8.5^\circ$ . With increasing substrate temperature during deposition, both crystallite size and the magnetization ripple wavelength increased, the latter reaching 2.5 micron at a substrate temperature of  $200^\circ$ . The films deposited on  $100^\circ$  substrates all showed fine magnetic structure and magnetization ripples. Even the film containing 70% Ni, whose crystal anisotropy should be zero, had ripples; this is ascribed to composition fluctuations giving rise to regions of local crystal anisotropy. The magnetization ripple wavelength in this series of films was strongly correlated with the coercive force, both passing through a minimum at the same composition (80% Ni). A single-crystal film (80% Ni) was also investigated. This film had biaxial magnetic anisotropy and also exhibited magnetization ripples with a wavelength of 1.35 micron. The magnetization ripples in the single-crystal film were found significantly to affect the process of quasistatic magnetization switching in it. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/

SUM DATE: 00/

ORIG REF: 000/ OTH REF: 007

L 06761-67

ACC NR: AP0029128

to obtain in all three metals between the wavelength of the magnetization ripples and the linear dimensions of the crystallites, and between the magnetization ripple wavelength and the coercive force. The magnetization ripple wavelength increased with increasing grain size and with increasing coercive force. Both uniaxial and isotropic films were investigated, and both showed well developed magnetic fine structure. The authors, therefore, cannot agree with E.Fuchs (Z. angew. Phys., 14, 203 (1962)) and others who assert that magnetization ripples are due to superposition of uniaxial anisotropy onto crystal anisotropy; uniaxial anisotropy, rather, can only affect the amplitude of the magnetization vector oscillations. The effect of quasistatic magnetization switching on the magnetic fine structure was investigated. In general, the switching process begins with a change in the fine structure owing to rotation of the magnetization and reversal of the walls of the ripples, and ends with a sudden reorganization of the whole structure or with a shift of the walls that have been formed. Orig. art. has: 4 figures.

SUB CODE: 20/

SUBM DATE: 00/

ORIG REF: 000/

OTH REF: 007

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TOPCHIEV, A.V., akademik, redaktor; TROFIMUK, A.A., redaktor; TREBIN, F.A., doktor tekhnicheskikh nauk, redaktor; FEDYNSKIY, V.V., doktor fiziko-matematicheskikh nauk, redaktor; SUKHANOVA, V.P., inzhener, redaktor; POSTNIKOV, V.G., redaktor; VOL'FSON, S.I., redaktor; BEKHMEN, Yu.K., vedushchiy redaktor; KOVALEVA, A.A., vedushchiy redaktor; PERSHINA, Ye.G., vedushchiy redaktor; SAVINA, Z.A., vedushchiy redaktor; USOVA, N.G., vedushchiy redaktor; ZAMARAYEVA, K.M., vedushchiy redaktor; NOVIKOVA, M.M., vedushchiy redaktor; L'VOVA, L.A., vedushchiy redaktor; YERSHOV, P.R., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskii redaktor; TROFIMOV, A.V., tekhnicheskii redaktor

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VASIL'YEV, Ye.I., kand. tekhn. nauk; DEMIN, A.M., kand. tekhn. nauk;  
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NEVSKIY, V.N., kand. tekhn. nauk; POTAPOV, M.G., kand. tekhn. nauk;  
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ekspeditsiya.  
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EL'KINA, E.M., tekhn. red.

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Tovarovedenie prodovol'stvennykh tovarov; tovary molochnye zhi-  
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1. Kuznetskiy metallurgicheskiy kombinat.

AUTHOR: Zolotov, Yu. A., Alimarin, I. A., Sadhanovsky, A. I.

TITLE: Extraction of trivalent thallium from chloride solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 2, 1965, 165-171

TOPIC TAGS: thallium extraction, thallium determination, ether, amyl acetate, ultraviolet absorption, chloride solution

ABSTRACT: The authors studied the extraction of thallium (III) from hydrochloric acid solutions and lithium chloride solutions with ethers (diethyl, diisopropyl, dibutyl ether) and amyl acetate. The extraction was studied as a function of the HCl concentration or hydrogen ion concentration at a constant ionic strength and constant chloride ion concentration, and also as a function of the thallium concentration. The organic phases were analyzed for the main components, and the absorption spectra of aqueous chloride solutions and extracts were recorded in the ultraviolet. The data obtained indicate that in all cases thallium is extracted only in the form of the complex acid  $HTlCl_4$ , since the

with very low extraction efficiency.

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ACCESSION NR: AP5005841

thallium to the extent of 98-99% even in 0.3-0.8 NHCl. Orig. art. has: 5 figures and 3 tables.

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A.I.

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CHERNOUDOV, Nikolay Nikolayevich; SIDKHANOVSKIY, Aleksey Il'ich; GRIGOR'YEV,  
P.I., red.; MOROZOV, Yu.V., red. izd-va; SHITS, V.P., tekhn. red.

[Principal problems in planning production costs of the lumber  
industry in economic councils] Osnovnye voprosy praktiki pla-  
nirovaniia sebestoimosti produktsii lesnoi promyshlennosti v  
sovnarkhozakh. Moskva, Goslesbumizdat, 1958. 59 p. (MIRA 11:9)  
(Lumbering—Cost)

SHCHEDRIN, Boris Yefimovich; SUKHANOVSKIY, A.I.

[Principles of planning in the lumbering industry and ways of  
improving it] Osnovy planirovaniia v lesozagotovitel'noi pro-  
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CHERNOUDOV, Nikolay Nikolayevich; SUKHANOVSKIY, Aleksey Il'ich;  
GRIGOR'YEV, P.I., retsenzent; POPOV, V.A., red.; GORYUNOVA,  
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SHCHEDRIN, Boris Yefimovich; SUKHANOVSKIY, Aleksey Il'ich; GOZHEV,  
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(Lumbering--Handbooks, manuals, etc.)

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S/109/61/006/005/006/027  
D201/D303

9,9100

AUTHORS: Kokurin, Yu.L., Sukhanovskiy, A.N., and Alekseyev, Yu.  
1.

TITLE: Investigating of models of large-scale inhomogeneities  
in the ionosphere using the radioastronomical method

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 5, 1961,  
738 - 746

TEXT: It has already been shown by V.V. Vitkevich, and Yu.L. Koku-  
rin (Ref. 1: Radiotekhnika i elektronika 1957, 2, 7, 826) that the  
oscillations of the refraction of radiowaves propagated through the  
whole thickness of the ionosphere are conditioned by the presence  
in the ionosphere of inhomogeneities with horizontal dimensions of  
the order of hundreds of kilometers. Again Yu.L. Kokurin (Ref. 2:  
Radiotekhnika i elektronika 1959, 4, 12, 1985) approximated the  
evaluation of the dependence of the mean amplitude of oscillations  
of refraction  $(R_n)_{\max}$  on the vertex angle  $z$ , and it was

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Investigating of models ...

tangent was taken as the amplitude of the oscillation of refraction  $(R_n^v)_{\max}$ . Angular dimensions were then transposed into the linear dimension  $d$  under the assumption that the distribution of the inhomogeneity was at a height  $h_0 = 300$  km (Ref. 1: Op.cit.). The value of  $d$  oscillation between 100 - 500 km with its most probable value  $\bar{d} \approx 200 - 220$  km. The amplitudes of oscillations of refraction  $(R_n^v)_{\max}$ , averaged over every session of observation, lie basically within the limits 0.5 - 5.0' with the most probable value  $(R_n^v)_{\max} = 2.5 - 3.0'$ . From the above data the parameters of the two models of inhomogeneities were evaluated as follows: Model 1. Assuming the linear dimensions  $\bar{d} \approx 200$  km its effective thickness  $L = 50$  km and the refractive index  $n = 0.9983$  ( $N = 1.8 \cdot 10^6 \text{ cm}^{-3}$ ) the difference between the geometrical and optical thickness of the inhomogeneity is  $L \approx 80$  m. From Equation (6) obtained by Yu.L. Kokurin (Ref. 2: Radiotekhnika i elektronika, 1959, 4, 12, 1985) the variations of

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this difference

$$L = (R_n^V)_{\max} d \frac{\left(1 - \frac{r_0}{r_0 + h_0} \sin z\right)^2}{2\pi} = 2,7 - 3,5 \text{ km} \quad (1)$$

(radius of earth -  $r_0$ ) from which  $\frac{\Delta L}{L} = 3.3 - 4.4 \%$ ; thus if the irregularities in the refraction are due to the presence in the F layer of horizontal gradients, the horizontal changes (with an average period  $\sim 200$  km) of the optical thickness of large inhomogeneities and of the total number of electrons in them are  $3.3 - 4.4 \%$ . Model 2. For the same parameters of inhomogeneities for the wave model the following is obtained using Equation (10) from Yu.L. Korkurin (Ref. 2: Op.cit.).

$$\Delta h = \frac{(R_n^V)_{\max} d^2 \left[1 - \left(\frac{r_0}{r_0 + h_0} \sin z\right)^2\right]^{1/2}}{L(2\pi)^2 \frac{r_0}{r_0 + h_0} \sin z} = 0,45 - 0,54 \text{ km} \quad (2)$$

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D201/D303

Investigating of models ...

It follows that the observed oscillations in the refraction may be attributed to the wave structure of the ionosphere inhomogeneities with a period  $\bar{d} = 200$  km and amplitude of the wave  $\Delta h \approx 0.5$  km. The observations of the irregular refraction near the vertex were carried out in the Crimea (44°N) using a horizontal interferometer consisting of two parabolic antennas spaced in an East-West direction by about  $D = 520$  m; the effective beam width was about  $15^\circ$ . In order to determine the curves of the dependence of the irregular refraction  $R_n$  on time, the position of the antenna lobes were determined in time units with the origin as the instant of culmination of the source. Observations were made between December 12, 1958 and June 1, 1959 with four cosmic sources. Graphs are given for every session of observations for  $R_n = f(t)$ . The authors conclude that large-scale ionosphere inhomogeneities represent wave type formations (Model II) with an average horizontal scale (period)  $\bar{d} \approx 200$  km and the amplitude of the wave  $\Delta h \geq 0.5$  km. Only an insignificant thickness of the layer seems to have a wave structure. This thickness is  $\leq 20\%$  of its total effective value. It would

Card 5/76

KOKURIN, Yu.L.; KOVURA, Yu.A.; SUKHANOVSKIY, A.N.

Method for measuring the north-south component of the refraction  
of microwaves in the ionosphere and the optical strata gradient,  
Radiotekh. i elektron. 10 no.5:939-940 My '65. (MIRA 18:5)

L 22702-66 EWT(1)/T . IJP(c) JXT(CWW)/GW

ACC NR: AP6010439

SOURCE CODE: UR/0386/66/003/005/0219/0223

AUTHOR: Kokurin, Yu. L.; Kurbasov, V. V.; Lobanov, V. F.; Mozhzherin, V. M.; Sukhanovskiy, A. N.; Chernykh, N. S.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR  
(Fizicheskii institut Akademii nauk SSSR)

TITLE: Measuring the distance to the moon<sup>21</sup> by an optical method<sup>9M</sup>

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 5, 1966, 219-223

TOPIC TAGS: moon, moon earth distance, distance measurement, moon location, optical location, laser application

ABSTRACT: A description is given of the experimental measurement of the distance to the moon by means of an optical locator. A schematic of the locator is shown in Fig. 1. Ruby laser 1 and photomultiplier 2 are fixed rigidly in the Kude focus of telescope 3. A tunable interference filter 4 is placed in front of the photomultiplier and behind diaphragm 5. Mirror 6 can be automatically switched from receiving to transmitting operations. Photomultiplier output amplifier and pulse shaper 7 follow 2, and the measurement of the time intervals between the emission and reflection (from the moon) of laser pulses is made by

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ACC. NR: AP6010439

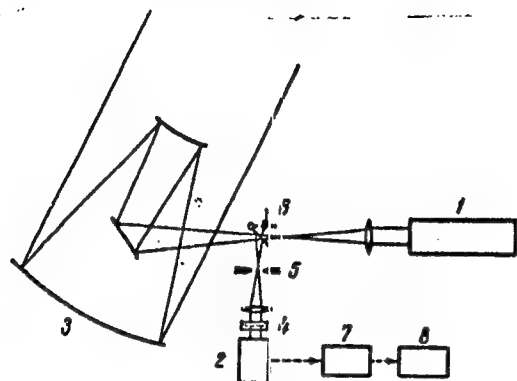


Fig. 1. Schematic of the locator

counter 8, which is activated by that portion of the laser pulse directed to the photomultiplier. The laser operated at  $6943 \text{ \AA}$ , with a pulse energy and duration of  $5-7 \text{ j}$  and  $5 \cdot 10^{-8} \text{ sec}$ , respectively. The diameter of the main telescope mirror was  $2.6 \text{ m}$  and its focal length  $104 \text{ m}$ ; the beam diameter was  $13 \text{ mm}$ , and the divergence of the beam reflected from the telescope mirror was  $23 \text{ sec of arc}$ . The filter pass-band was  $10 \text{ \AA}$ , and the instrumental error in the measurement of time  $\pm 10^{-7} \text{ sec}$ . The observation of the lunar surface was confined to an area located at the bottom of the Flammarion crater with the selenographic



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ACC NR: AP6010439

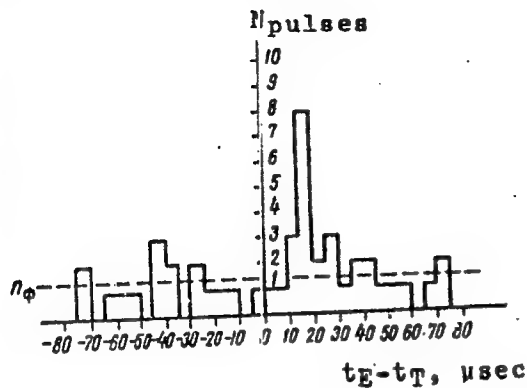


Fig. 2. Results of measurements

coordinates of  $\lambda = 3^\circ.57$  and  $\phi = 2^\circ.98$ . The results of observations are shown in Fig. 2. as a frequency distribution of the quantity  $t_E - t_T$  in 10-usec class intervals ( $t_E$  and  $t_T$  are the experimental and calculated times, respectively, required by a signal to complete the round trip). The signal-to-noise ratio was  $\sim 5$  and the mean of the useful signal was found to be distributed within the 15—20 usec class boundary, with a standard deviation of  $1.2 \times 10^{-6}$  sec. The total error in positioning the distribution center was  $21.3 \times 10^{-6}$  sec, which corre-

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ACC NR: AP6010439

sponds to 200 m error in the measurement of distance. Orig. art. has:  
2 figures. [YK]

SUB CODE: 20/ SUBM DATE: 22Jan66/ ORIG REF: 002/ OTH REF: 001

ATD PRESS: 4229

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ACC NR: AP6019595

SOURCE CODE: UR/0293/66/004/003/0414/0426

AUTHOR: Kokurin, Yu. L.; Kurbasov, V. V.; Lobanov, V. F.; Mozhzherin, V. M.; Sukhanovskiy, A. N.; Chernykh, N. S.

ORG: none

TITLE: On the feasibility of measuring lunar disk and orbital parameters by optical radar

SOURCE: Kosmicheskoye issledovaniye, v. 4, no. 3, 1966, 414-426

TOPIC TAGS: lunar albedo, moon, laser application

ABSTRACT:

Yu. L. Kokurin and coworkers [1] have reviewed the theoretical problems in laser ranging of the moon, with the object of determining more accurate values for several Earth-Moon parameters. The authors discuss methods for 1) obtaining a more detectible reflection signal and 2) using the measured range to compute such parameters as mean lunar orbital radius, lunar disk radius, parallax constant, and Earth equatorial radius.

The basic range equation for a reflected electromagnetic signal is taken as a starting point. The factors are the same as in the radar range equation, except that the return signal varies inversely as the square, rather than as the fourth power, of range, since it is assumed that all the generated laser flux is incident on the Moon. Using an average figure for atmospheric absorption, a lunar albedo of 0.1, and an effective telescope area of  $5.3 \text{ m}^2$  (actual area of a telescope currently in use), the authors calculate

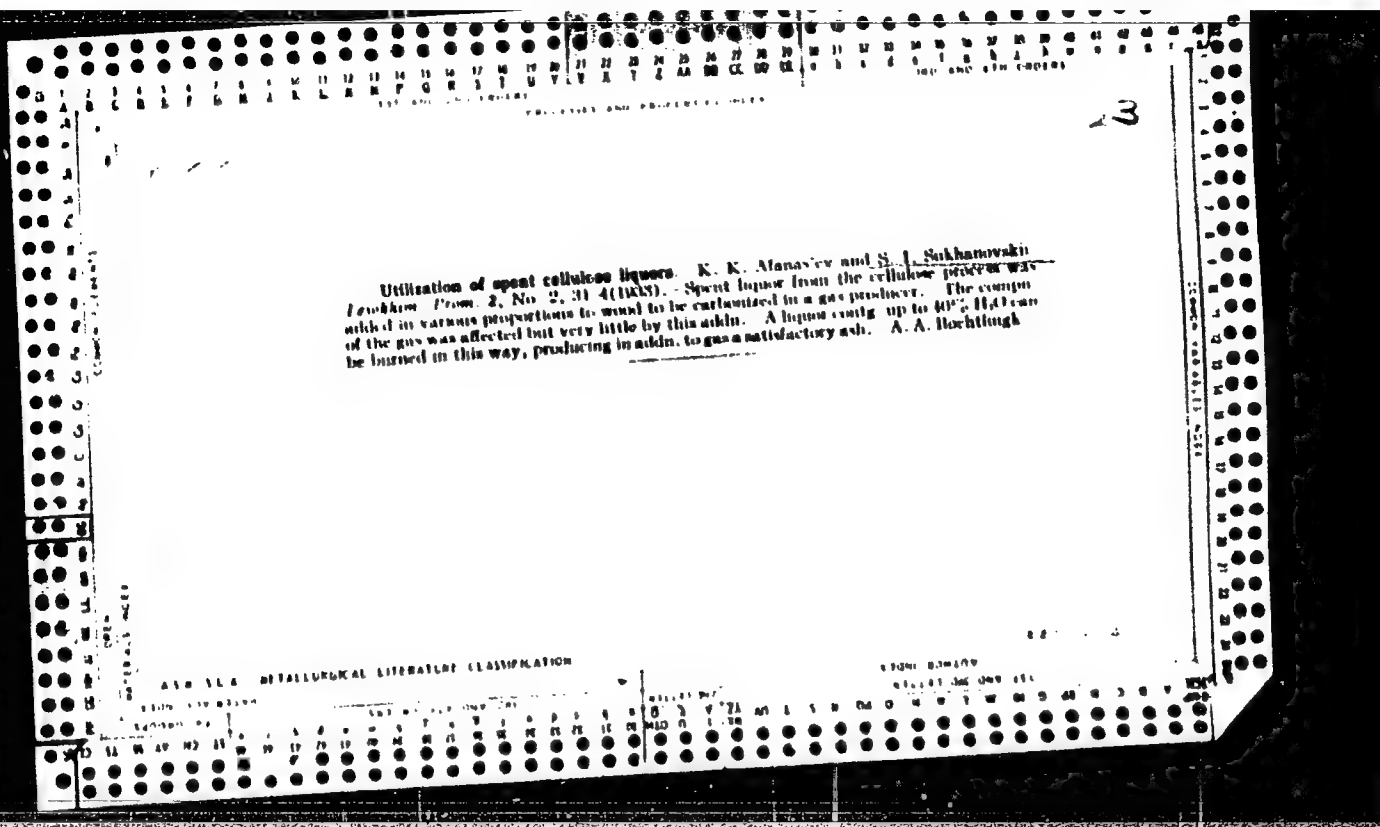
UDC 522.31.082.5 + 521.61.082.5

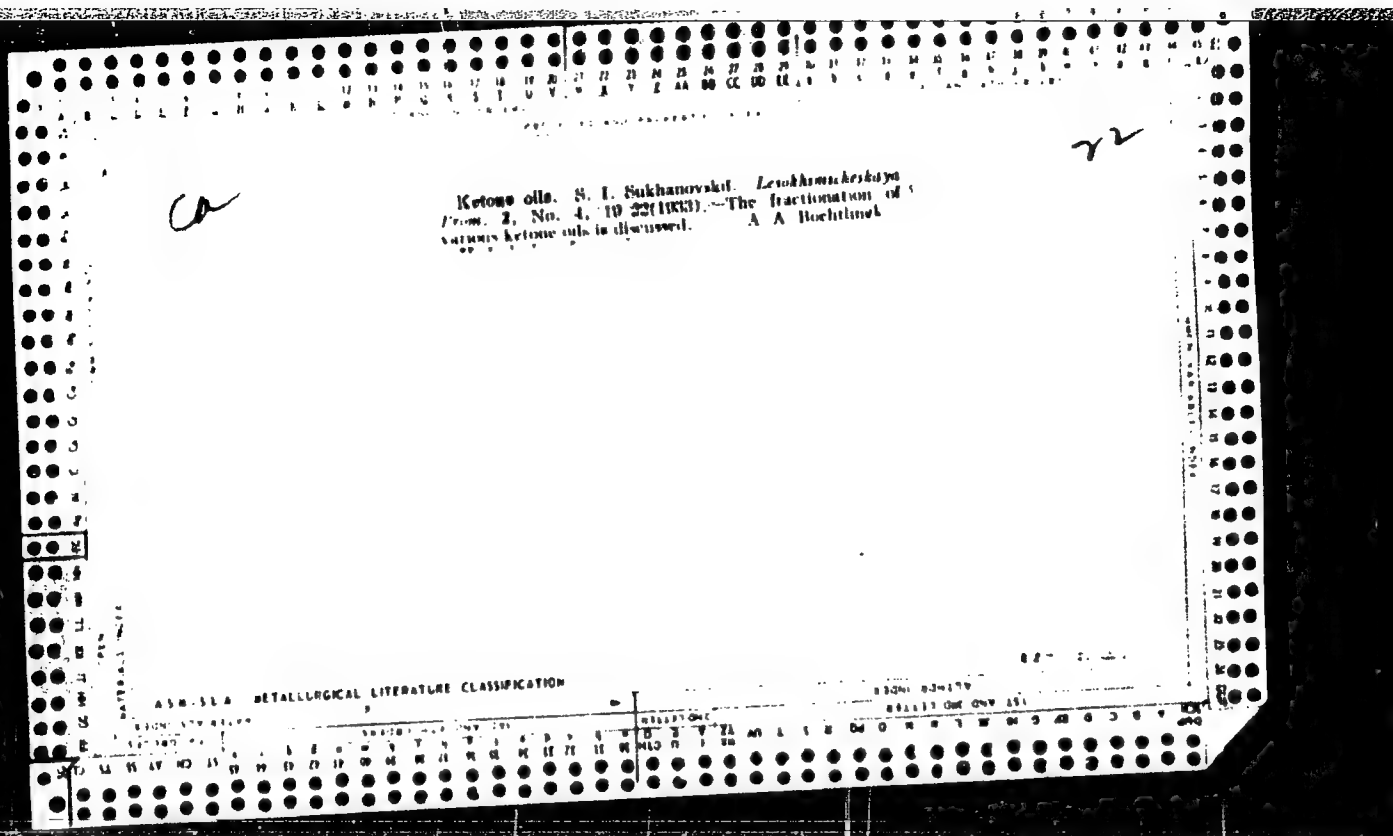
ACC NR: AP6019595

the distance of the target area from the center of the lunar disk. An obvious way to improve the technique would be to place some form of mirror on the Moon; the authors propose an optical corner reflector for this purpose (see Fig. 1) and have analyzed ways of optimizing its design. With the density of the reflector material assumed to be the limiting factor, it is shown that one large reflector is more effective than several small ones. For a glass corner reflector, the gain  $\beta$  in return signal over that from the lunar surface alone (assuming a ruby laser) is calculated to be  $\beta = 2.15 \times 10^{-3} a^4$ , where  $a$  is the length of a joint edge in cm. (see Fig. 1). Assuming a glass density of 2.7 g/cc, the authors find values of gain ranging from  $\beta = 25$  for  $a = 10.4$  cm up to  $\beta = 1330$  for  $a = 28.2$  cm. Some loss in reflectivity

Fig. 1. Corner reflector (Hexagon indicates effective reflective area)

must be anticipated, such as by dust contamination, so the foregoing figures are based on a reflection coefficient of only 0.5.





*JSC*

B-2-5

Mention of spent cellulose liquors. K. K. MANASKY and S. I. RUKHOMOVET (Leningrad. Prom., 1933, 2, No. 2, 31-34).—The liquor ( $\approx 60\%$  H<sub>2</sub>O) is added to wood to be carbonized in a gas producer; the composition of the gas is little affected. Ch. Ann.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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Methods for the determination of formic, acetic, propionic and oleic acids. S. I. Sukhanovskii and E. V. Roginskaya. *Leokhimicheskiye Prots.* No. 5-6, 21-9 (1934).—The mixt. of acids is evapd. in the presence of  $PbO$  for the sepn. of propionic acid. To the filtrate  $H_2SO_4$  is added to ppt.  $PbSO_4$ , which is filtered off and washed with  $H_2O$  to the disappearance of  $PbSO_4$ .  $H_2SO_4$  is sepd. from the filtrate by adding  $Ba(OH)_2$ , and the residue is sepd. The filtrate, which contains salts of  $HCO_2H$  and  $AcOH$ , is extd. with gasoline in the presence of a satd. soln. of  $CaCl_2$  and  $NaCl$ . The aq. part is neutralized and evapd. to dryness, and the residue is fused with  $KOH$  and  $CaO$  for the detn. of  $AcOH$ .  $AgNO_3$  should be added in both cases to a sample of the soln. to ppt.  $Cl^-$  before titrating with  $KMnO_4$ . The  $HCO_2H$  is detd. in a sep. sample by the Skala method or by oxidizing with  $HgO$ . Oleic acid is detd. by difference. Thirteen references. A. A. Iuehtling

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION



Rapid methods for the determination of the free and combined acid and base in solutions of calcium acetate. *Lashchinskaya*  
N. I. Sukhoruchik and R. R. Ryzhinskaya. *Tr. Khim. Akad. Nauk SSSR*, No. 12, 20-26 (1961). A discussion of known methods covering (1) detn. of free acid, (2) detn. of the free base and (3) detn. of combined acid.  
A. A. Bozhilnik

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New volumetric formic acid determination method.  
S. I. Sukhanovskii and E. V. Roginskaya. *Leningradskii khimicheskiy zhurnal* 1963, 17(1035). - A modification of the Shala  
method is proposed for production control exams.  
A. A. Bozhilinsk

| 100 AND 1000 (10)   |  |  |  |  |  |  |  |  |  | 100 AND 1000 (10) |  |  |  |  |  |  |  |  |  |
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| PROCESSING AND REPRODUCTION INDEX   |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
| <p>Formic acid determination in the products of wood<br/>pyrolysis (high-temperature cracking). S. I. Sukhanov-<br/>skij and E. V. Roginskaya. <i>Lazokhem. Pross.</i> 4, No. 12,<br/>15-18(1935); <i>J. C. A.</i> 29, 7870<sup>9</sup>.—Critical review of the<br/>existing gravimetric and volumetric methods. Ten<br/>references. A. A. Podgorny</p> |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
| ASH-11A METALLURGICAL LITERATURE CLASSIFICATION   |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
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CA

RELEASED AND PREPARED INDEX

The composition of acetate powder of the Ishevskii chemical plant. S. I. Sukhanovskii and R. V. Roginskaya. *Izv. Akad. Nauk SSSR, Ser. Khim.* 1961, No. 4, 710 (1961). The dry Ca acetate powder contains Ca salts (as acetate) 69.9, tar 18.1, insol. matter 0.7, CaO (free) 1.3, water of crystn. 7.7, losses and undetd. substances 2.6%. Total acids are HCO<sub>2</sub>H 25.00, AcOH 60.68 and EtCO<sub>2</sub>H 8.32%.

A. A. Podgorny

ASS. SLA. METALLURGICAL LITERATURE CLASSIFICATION

U A I 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**Production of acetic acid from the Ishevsk wood generator gas powder.** *B. I. Sukhanovskaya, B. N. Sokolov and Z. I. Tikhonova. Izvestiya. Prom. 1938, No. 3, 2-5; Khim. Referat. Zhur. 2, No. 4, 132(1939).* - The treatment of both the generator gas powder (containing about 61% of  $C_4H_8AcO$ ) and 17.2% of  $Ca$  substance) and the standard powder was investigated under production conditions. About 2.458 tons of the 60% powder was used for each ton of crude  $AcOH$  obtained (calcd. to 100%) in flowing with steam. The amt. of 78%  $H_2SO_4$  required for the same unit was 1.74-1.80 tons. The content of  $HCOOH$  in the powder was up to 25% of the amt. of the total acids. The losses of up to 10.4% of the acid are attributed to the destruction of  $HCOOH$  during the treatment of the powder. The generator gas powder can be used in ordinary Linde app. with an insignificant change of the tech. process.

W. R. Henn

W. R. HENRICH

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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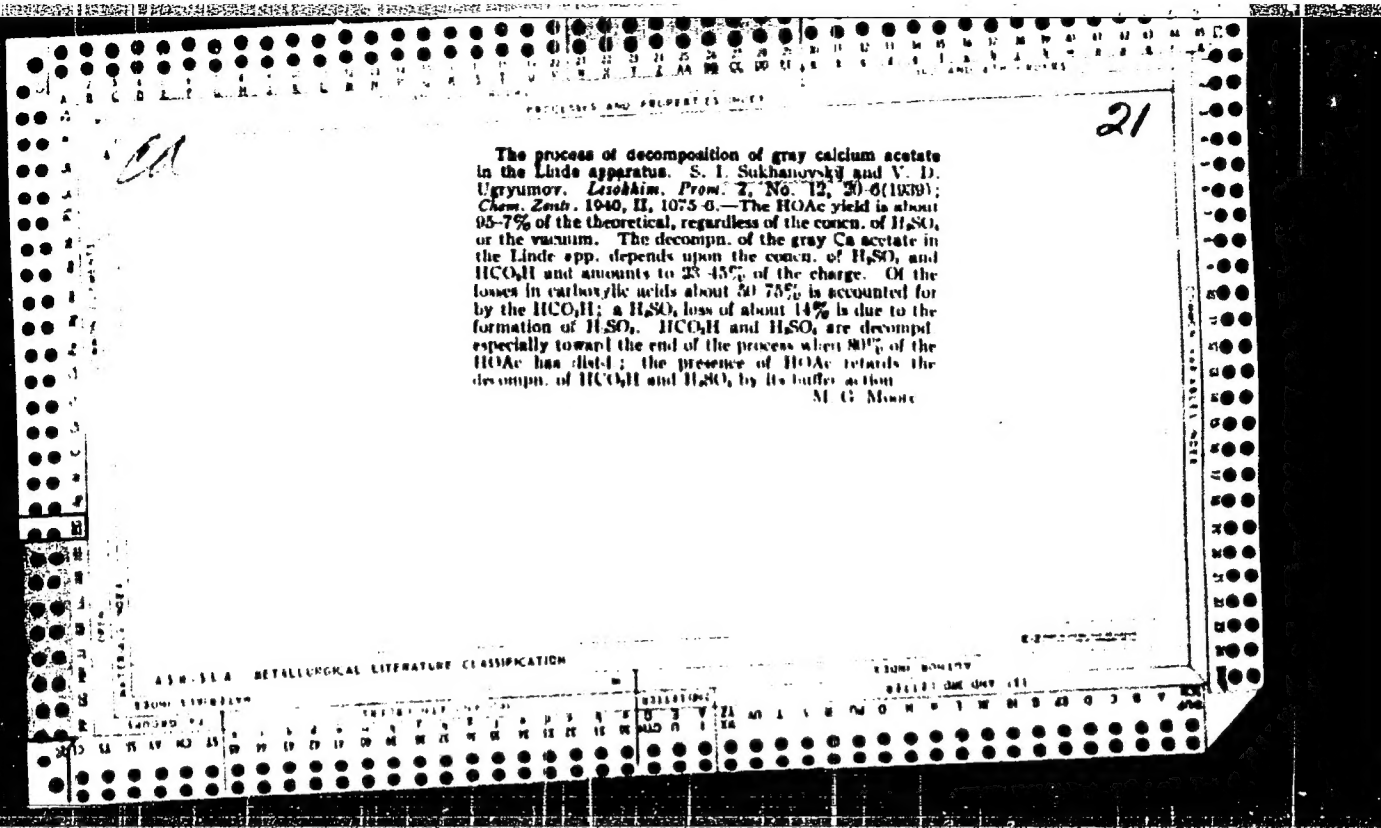
Calcium acetate. S. I. Sukhanovskii, V. D. Ugryumov and B. N. Sokolov. Russ. Zh. Khim., Nov. 30, 1939. To obtain Ca acetate free from formate, the vapors from wood distn. are treated with a soln. of NaOH or NaOAc in amt. not in excess of 50% of that needed theoretically to combine with the formic acid, then treated in the usual way with Ca(OH)<sub>2</sub>.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

| 1ST AND 2ND ORDERS  |  |  |  |  |  |  |  |  |  | 140 AND 175 (4819)        |  |  |  |  |  |  |  |  |  |
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| PROCESSES AND PROPERTIES INDEX  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| <p>ca</p>   |  |  |  |  |  |  |  |  |  | <p>20</p>                 |  |  |  |  |  |  |  |  |  |
| <p>Factors which affect the output of the Linde apparatus [acetic acid production]. S. I. Sukhanovskii and B. N. Sukhov. <i>Lakshim. Prom.</i> 2, No. 8, 26-31 (1939); <i>Chem. Zentr.</i> 1940, I, 626. — Practical experience with a Linde app. of 4.15 cu. m. capacity in a Russian plant showed its efficiency to depend on the following factors: (1) The charge of acetate: Increasing the charge from 1050 to 1400 kg. increased the output 20%. (2) Treatment of the gypsum with dry steam for 30 min. increased the yield of H<sub>2</sub>OAc 1.2%. Longer treatment with dry steam or a final drying of the gypsum were ineffective. (3) Concn. of the H<sub>2</sub>SO<sub>4</sub>: An increase of 10-12% in the concn. of the H<sub>2</sub>SO<sub>4</sub> produced the same increase in yield. A disadvantage of this procedure is the increased consumption of acetate. (4) Vacuum: By working at 600 mm. of Hg instead of 100 the distn. was accelerated by 30-40% and the loss of H<sub>2</sub>OAc was reduced by 1%.<br/>M. G. Moore</p> |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| <p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| <p>1ST AND 2ND ORDERS</p>   |  |  |  |  |  |  |  |  |  | <p>140 AND 175 (4819)</p> |  |  |  |  |  |  |  |  |  |
| <p>1ST AND 2ND ORDERS</p>   |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |

| PROCESSING AND PROPERTY INDEX   |  |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1ST AND 2ND CATEGORIES  |  |  |  |  |  |  |  |  |  |  |  |  | 100 AND 270 CATEGORIES |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>Methods for the determination of aldehydes and ketones in the products of wood pyrolysis. S. I. Sukhanovskii. <i>Levokhim. Prom.</i> 2, No. 9, 37-42(1939); <i>Chem. Zentr.</i> 1940, I, 1063.—The detn. of aldehydes in the presence of ketones in a neutralized steam distillate or in the soln. obtained by refluxing with NaOH soln. can be based on the reaction with Newkier reagent contg. a known quantity of NaOH and titration of the excess NaOH. CH<sub>2</sub>O by itself can be oxidized to formate by H<sub>2</sub>O<sub>2</sub> in the presence of a known quantity of NaOH and detd. by titrating the excess NaOH. For the first of these titrations, phenolphthalein is a good indicator and for the second methyl red. Ketones, when alone, can be detd. by treatment with NH<sub>2</sub>OH.HCl and titrating the excess reagent with NaOH to a methyl orange end point. The procedure of Platonov and Plakidina (C. A. 29, 2478) for ketones is to be recommended. H. E. Wirth</p> |  |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASB-ELA METALLURGICAL LITERATURE CLASSIFICATION</p>  |  |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>FROM STEELING</p>  |  |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>RESEARCH</p>   |  |  |  |  |  |  |  |  |  |  |  |  |                        |  |  |  |  |  |  |  |  |  |  |  |  |
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| PROCESSING AND PROPERTY INDEX   |  |  |  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1ST AND 2ND ORDERS  |  |  |  |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS        |  |  |  |  |  |  |  |  |  |  |  |  |
| 21  |  |  |  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>Investigation of the French type portable carbonizers.<br/> S. I. Sukhannyakii and Z. T. Tikhonova. <i>Leningrad. Khim. Referat. Zhur</i> 1939, No. 4, 404; <i>Khim. Referat. Zhur</i> 1939, No. 8, 119 --Results of investigations of the yields of wood charcoal and of its quality depending on the type of the app., the properties of the raw material and the carbonization conditions are given.</p> <p style="text-align: right;">W. R. Henn</p> |  |  |  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>ASS-SL-4 METALLURGICAL LITERATURE CLASSIFICATION</p>   |  |  |  |  |  |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>1ST AND 2ND ORDERS</p>   |  |  |  |  |  |  |  |  |  |  |  |  | <p>3RD AND 4TH ORDERS</p> |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>1ST AND 2ND ORDERS</p>   |  |  |  |  |  |  |  |  |  |  |  |  | <p>3RD AND 4TH ORDERS</p> |  |  |  |  |  |  |  |  |  |  |  |  |

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Separation of formic acid from acetic acid. I. Sukhanovskii and V. D. Vasyunov. *Izvestiya Akad. Nauk SSSR, Khim. Ser.* 1940, No. 3, 1939, No. 11, 5-8; *Khim. Referat. Zh.* 1940, No. 3, 110. —The method of partial neutralization was not effective for producing AcOH free from HCO<sub>2</sub>H. Good results were obtained by the method of exchange decomp. On passing the mixt. of vapors of AcOH and HCO<sub>2</sub>H through a AcONa soln. (taken in an amt. equal to 1.8 equivs. with regard to HCO<sub>2</sub>H) practically all HCO<sub>2</sub>H is retained in the soln. in the form of HCO<sub>2</sub>Na and pure AcOH is obtained in the distillate. W. R. Hunt

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

| ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION |   |   |   |   |   |   |   |   |    | ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION |    |    |    |    |    |    |    |    |    |
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| COMMON ELEMENTS |    | COMMON RARE EARTH METALS |     |
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| 97              | 98 | 99                       | 100 |

AcOH. S. I. Sukhanovskii, V. D. Ugryumov and B. N. Sokolov. Russ. 57,940, Sept. 30, 1940. Ca(OAc)<sub>2</sub> is treated with H<sub>2</sub>SO<sub>4</sub> and about 70% of the AcOH formed is distd. off. The remaining AcOH is distd. separately from the reaction mixt. after addn. of water or dil. AcOH.

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ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

FROM BOMBY

REALLY ONE ONLY 191